

"Reply under 37 CFR 1.116

--Expedited Procedure--

Examining Group 2882

DOCKET NO. GEVA 6-2-4-21

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Michael Geva, *et al.*

Serial No.: 09/757,099

Filed: January 8, 2001

For: ELECTRONIC DEVICE HAVING A BARRIER REGION INCLUDING  
ALUMINUM AND A METHOD OF MANUFACTURE THEREFOR  
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Group No.: 2882

JAN 13 2003

Examiner: Wang, George Y.

TECHNOLOGY CENTER 2800

Honorable Commissioner of Patents  
Washington, D.C. 20231

Sir:

I hereby certify that this correspondence is being facsimile  
transmitted to the Patent and Trademark Office (Fax No. (703)  
308-7724) on January 13, 2003.

Elizabeth Schumacher

Typed or printed name of person signing this certificate

Elizabeth Schumacher

Signature

**REQUEST FOR RECONSIDERATION UNDER 37 C.F.R. § 1.111**

In response to the Examiner's Action mailed November 29, 2002, please reconsider the  
above-identified application given the following remarks:

**REMARKS/ARGUMENTS**

The Applicants have carefully considered this application in connection with the  
Examiner's Action and respectfully request reconsideration of this application in view of the  
following remarks.

The Applicants originally submitted Claims 1-20 in the application. In a previous response to an Examiner's Action, the Applicants canceled Claims 17-20 without prejudice or disclaimer. Presently, the Applicants have neither amended, canceled nor added any claims. Accordingly, Claims 1-16 are currently pending in the application.

**I. Rejection of Claims 1-16 under 35 U.S.C. §103**

The Examiner has rejected Claims 1-16 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,546,480 to Burnham, *et al.* (Burnham) in view of the foreign Patent No. WO 97/50133 to DePoorter (DePoorter). Independent Claims 1 and 9 currently include the element that an undoped layer be located over an active region, a barrier region including aluminum be located over the undoped layer, and a doped upper cladding layer be located over the barrier region. Neither Burnham nor DePoorter teaches or suggests such elements.

In contrast to that claimed, Burnham is directed to an injection laser having quantum size effect transparent waveguiding. (Title) Burnham teaches that the laser includes an active layer 36 located on a lower cladding layer 34, wherein the active layer 36 has an upper cladding layer 41 formed directly thereon. (See FIG. 2 and column 4, lines 20-60). Burnham teaches that the active layer 36 may include an active region 38. In an alternative embodiment, Burnham teaches that the active layer 36 may comprise multiple quantum well passive regions 36.1. (Column 5, lines 45-48). Burnham further teaches that the device of FIG. 4 is identical to that of FIG. 2, except that the active layer 36 of FIG. 4 comprises the aforementioned quantum well passive regions. Burnham also teaches that an implantation step forms current confinement regions 46 in a content layer 40 located on the upper cladding layer 41.

The Examiner incorrectly asserts that the aforementioned current confinement regions 46 are active regions. To the contrary, the current confinement regions 46 are just what their name suggests. In other words, the current confinement regions 46 confine the current being provided by the upper contact 42 to the active region 38. Accordingly, the current confinement regions 46 are not acting as active regions as the Examiner suggests, but acting as standard confinement regions. As the only true active regions taught by Burnham are the active layer 36 and active region 38 (Fig. 2 and Fig. 4), and Burnham teaches that its upper cladding layer 41 is located directly on its active layer 36 and active region 38, Burnham fails to teach or suggest that an undoped layer and a barrier region be located between the active region and the doped upper cladding layer, as required by the present invention. Accordingly, Burnham fails to teach or suggest such elements.

DePoorter fails to correct the deficiencies of Burnham. The Examiner is offering DePoorter for the sole proposition that the upper cladding layer may be doped with zinc. Notwithstanding the accuracy of the Examiner's assertion, a teaching of doping an upper cladding layer with zinc is far from that which is presently claimed in independent Claims 1 and 9. Accordingly, DePoorter also fails to teach or suggest the element that an undoped layer be located over an active region, a barrier region including aluminum be located over the undoped layer, and a doped upper cladding layer be located over the barrier region.

Thus, Burnham, individually or in combination with DePoorter, fails to teach or suggest the invention recited in independent Claims 1 and 9 and their dependent claims, when considered as a whole. Accordingly, the combination fails to establish a prima facie case of obviousness with respect to Claims 1 and 9. Claims 2-8 and 10-16 are therefore not obvious in view of Burnham and DePoorter.

In view of the foregoing remarks, the cited references do not support the Examiner's rejection of Claims 1-16 under 35 U.S.C. §103(a). The Applicants therefore respectfully request the Examiner withdraw the rejection.

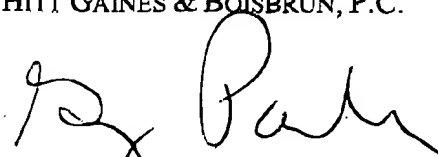
## II. Conclusion

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-16.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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Dated: 1-13-2003

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